

California Energy Resources
Conservation and Development Commission
Conservation Division

Regulations
for
Appliance Efficiency Standards

Relating to
Refrigerators, Refrigerator-Freezers and Freezers
and
Air Conditioners

Adopted
November 3, 1976

FACE SHEET
FOR FILING ADMINISTRATIVE REGULATIONS
WITH THE SECRETARY OF STATE

(Pursuant to Government Code Section 11380.1)

Copy below is hereby certified to be a true and correct copy of regulations adopted, or amended, or an order of repeal by:
STATE ENERGY RESOURCES CONSERVATION
 AND DEVELOPMENT COMMISSION

(Agency)

Date of adoption, amendment, or repeal:

November 3, 1976

By: *Richard M. ...*

Chairman

(Title)

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After proceedings had in accordance with the provisions of the Administrative Procedure Act (Gov. Code, Title 2, Div. 3. Part 1, Chapter 4.5) and pursuant to the authority vested by Sections 25213 and 25218(e) of the Public Resources Code, and to implement, interpret, or make specific Section 25402(c) of the Public Resources Code, the State Energy Resources Conservation and Development Commission hereby adopts its regulations in Title 20, Chapter 2, California Administrative Code, as follows:

SUBCHAPTER 4: ENERGY CONSERVATION
 ARTICLE 4: APPLIANCE EFFICIENCY STANDARDS

1601. Scope. Unless otherwise indicated, the provisions of this article shall apply to the following types of new appliances sold in California:

(a) Refrigerators, refrigerator-freezers, and freezers, which are directly operated by electricity.

(b) Room air conditioners, excluding those designed expressly for use in mobile homes, recreational vehicles and other mobile equipment.

(c) Central air conditioners, with a capacity of less than 65,000 Btu per hour excluding those designed expressly for use in mobile homes, recreational vehicles and other mobile equipment.

The provisions of this article shall not apply to new appliances manufactured in California, but sold outside the State.

Nothing in this article shall be construed as limiting the jurisdiction of the Commission to regulate industrial and commercial appliances, gas appliances or any other types of appliance.

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1602. Definitions For the purpose of this article the following definitions shall apply:

(a) General

"Manufacturer" means any person engaged in the production or assembly of an appliance. Manufacturer also includes any person whose brand or trademark appears on such appliance, if the brand or trademark of the person actually producing or assembling the appliance does not appear on the appliance.

(b) Refrigerators and Freezers

(1) "Automatic defrost system" means a defrost system in which the defrosting action for all refrigerated surfaces is initiated and terminated automatically.

(2) "Freezer" means a cabinet designed as a unit for the storage of food at temperatures of about 0° F, having the ability to freeze food, and having a source of refrigeration requiring an energy input.

(3) "Manual defrost system" means a defrost system in which the defrosting action for all refrigerated surfaces is initiated manually.

(4) "Partial automatic defrost system" means a defrost system in which the defrosting action for the refrigerated surfaces in the refrigerator compartment is initiated and terminated automatically and the defrosting action for the refrigerated surfaces in the freezer is initiated manually.

(5) "Refrigerator" means a cabinet designed for the refrigerated storage of food at temperatures above 32° F, and having a source of refrigeration requiring an energy input. It may include a compartment for the freezing and storage of food at temperatures below 32° F, but does not provide a separate low temperature compartment designed for the freezing of and the long-term storage of food at temperatures below 8° F. It has only one exterior door, but it may have interior doors on compartments.

(6) "Refrigerator-freezer" means a cabinet which consists of two or more compartments with at least one of the compartments designed for the refrigerated storage of foods at temperatures above 32° F, and with at least one of the compartments designed for the freezing of and the storage of frozen foods at temperatures of 8° F or below. The source of refrigeration requires energy input.

(7) "Upright freezer" means a freezer whose access door is at the front of the appliance.

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(c) Air Conditioners

(1) "Air conditioner" means one or more factory made assemblies which include an evaporator or cooling coil and an electrically driven compressor and condenser combination, and may include a heating function.

(2) "Central air conditioner" means an air-conditioner which is not a room air conditioner.

(3) "Central air conditioning heat pump" means a central air conditioner which is capable of heating by refrigeration.

(4) "Cooling capacity" means a measure of the ability of a unit to remove heat from an enclosed space under test conditions specified in Section 1603(b) and (c) of these regulations.

(5) "Energy efficiency ratio (EER)" means the ratio of the cooling capacity of the air conditioner in British thermal units per hour, to the total electrical input in watts under test conditions specified in Section 1603(b) and (c) of these regulations.

(6) "Packaged terminal air conditioner" means a room air conditioner consisting of a factory-selected combination of heating and cooling components, assemblies or sections, intended to serve an individual room or zone and constructed in a manner which complies with the definition contained in the Standard for Packaged Terminal Air Conditioners approved by the Air-Conditioning and Refrigeration Institute in 1976, known as ARI 310-76.

(7) "Room air conditioner" means a factory encased air-conditioner designed as a unit for mounting in a window or through a wall, or as a console. It is designed for delivery of conditioned air to an enclosed space without ducts.

(8) "Room air conditioning heat pump" means a room air conditioner, which is capable of heating by refrigeration.

(9) "Split system central air conditioner" means a central air conditioner consisting of two major components; a compressor-containing unit, normally installed outside the building, and a non-compressor-containing unit, normally installed within the building.

1603. Test Methods. (a) The manufacturer shall cause the testing of samples of each model of refrigerator, refrigerator-freezer and freezer, to be sold in California.

(1) Fresh food refrigerated volume, freezer refrigerated volume, total refrigerated volume and shelf area shall be measured using the American National Standard Methods of Testing for Household Refrigerators, Combination Refrigerator-Freezers and Household Freezers, approved by the American National Standards Institute on May 6, 1969, known as ANSI B 38.1-1970.

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(2) The energy consumption shall be measured using the standard test procedure approved by the Association of Home Appliance Manufacturers, in July 1975, known as HRF-2-ECFT.

(3) When manually operated anti-sweat switches are provided, the values of energy consumption shall be determined with these switches set at their highest energy consuming position.

(b) The manufacturer shall cause the testing of samples of each model of room air conditioner and room air conditioning heat pump to be sold in California. The cooling capacity, electrical input and energy efficiency ratio (EER) of packaged terminal air conditioners shall be measured using the test procedure approved by the Air-Conditioning and Refrigeration Institute in 1976,

known as ARI 310-76. The cooling capacity, electrical input and energy efficiency ratio (EER) of all other room air conditioners and room air conditioning heat pumps shall be measured using the standard for room air conditioners, approved by the American National Standards Institute, Inc. on December 21, 1972, known as ANSI Z234.1-1972.

(c) The manufacturer shall cause the testing of samples of each model of central air conditioner and central air conditioning heat pump to be sold in California.

(1) The cooling capacity, electrical input and energy efficiency ratio of central air conditioners and central air conditioning heat pumps shall be measured using the following test procedures: central air conditioning heat pumps shall be tested using the test procedure approved by the Air-Conditioning and Refrigeration Institute in 1976, known as ARI 240-76; all other central air conditioners shall be tested using the test procedure approved by the Air-Conditioning and Refrigeration Institute in 1975, known as ARI 210-75.

(2) When a central air conditioner consists of more than one assembly, the assemblies shall be designed to be used together, and the requirements of rating shall be based upon use of matched assemblies.

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1604. Minimum Allowable Efficiency. (a) The energy consumption of all new refrigerators, refrigerator-freezers and freezers, sold or offered for sale in California on or after the date specified in Table A shall be certified not to exceed the values derived from the appropriate formulae where V is the total refrigerated volume (cubic feet) and EC is the energy consumption (kWh per month):

TABLE A

<u>Effective Date</u>	<u>Appliance</u>	<u>Formula</u>
November 3, 1977	Refrigerators	$EC = 40 + 2.5V$
	Refrigerator-freezers and freezers	
	(a) with automatic defrost system	$EC = 40 + 7V$
	(b) all others	$EC = 40 + 5V$
November 3, 1979	Refrigerators	$EC = 40 + 2.5V$
	Refrigerators-freezers	
	(a) with automatic defrost system	$EC = 40 + 5V$
	(b) all others	$EC = 40 + 4V$
	Freezers	
	(a) upright freezers with automatic defrost systems	$EC = 40 + 6V$
	(b) all others	$EC = 40 + 4V$

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(b) The energy efficiency ratio of all new air conditioners sold or offered for sale in California on or after the date specified in Table B shall be certified to be not less than the values shown.

TABLE B

<u>Effective Date</u>	<u>Appliance</u>	<u>EER</u>
November 3, 1977	Room air conditioners	
	those with cooling capacity equal to or greater than 20,000 Btu/hour	7.0
	other heat pumps	7.1
	all other room air conditioners	7.5
	Central air conditioners	
	heat pumps	6.7
	all others	7.0
November 3, 1979	Room air conditioners	
	those designed for use with a supply of at least 200 volts	8.2
	other heat pumps	8.3
	all other room air conditioners	8.7
	Central air conditioners	
	heat pumps	7.5
	all others	8.0

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(c) In verification of certified data submitted pursuant to this article, the following tolerance limits shall be allowed:

<u>Appliance</u>	<u>Characteristic</u>	<u>Tolerance Limits</u> (percent of certified value)
Refrigerators	Volume	Not less than 98.5 percent
Refrigerator-Freezers		
Freezers	Energy Consumption	Not more than 110 percent
Room air conditioners (including heat pumps and packaged terminal air conditioners)	Cooling capacity	Not less than 95 percent
	Energy consumption	Not more than 110 percent
Central air condi- tioners (including heat pumps)	Cooling capacity	Not less than 95 percent
	Energy consumption	Not more than 105 percent

1605. Certification. (a) After November 3, 1977, no new appliance described in Section 1601 of these regulations shall be sold or offered for sale in California, which is not certified by its manufacturer to be in compliance with the provisions of this article.

A split system central air conditioner, or a compressor-containing unit, may be sold if, and only if, the manufacturer of the compressor-containing unit certifies that that unit, when tested with at least one non-compressor-containing unit, is in compliance with the provisions of this article.

(b) The manufacturer shall submit a certification statement to the executive director for each model, containing the following information, except as provided in Subsection (c):

- (1) Name and address of manufacturer.
- (2) Type of appliance.
- (3) Brand name.
- (4) Model number, as it appears on the appliance name plate.
- (5) Name and address of laboratory where test for efficiency was performed.

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- (6) Date of test for efficiency.
(7) Results of the test for efficiency as follows:

a) Refrigerators and freezers

- 1) Energy consumption (kilowatt-hours per month)
- 2) Fresh food refrigerated volume (in cubic feet).
- 3) Freezer refrigerated volume (in cubic feet).
- 4) Total refrigerated volume (in cubic feet).

b) Air conditioners

- 1) Type (room or central, heat pump or cooling only).
- 2) Test procedure used.
- 3) Cooling capacity (Btu per hour).
- 4) Current, while cooling (ampere).
- 5) Power input, while cooling (watts).
- 6) Energy efficiency ratio (Btu per watt-hour).

(8) A declaration that the appliance model complies with Article 4, Subchapter 4, of Title 20, of the California Administrative Code.

The executive director may, at his discretion, prescribe a standard form for the certification statement.

(c) The manufacturer may, at his discretion, submit the following information in his certification statement in place of the information described in subsection (b)(3) through (7) inclusive of this section.

(1) A copy of those parts of the latest directory published by either the Association of Home Appliance Manufacturers or the Air-Conditioning and Refrigeration Institute which apply to the manufacturer's models. Each model being certified shall be clearly identified on the directory pages.

(2) A copy of the sales literature used in California describing each model being certified. If the model number in the sales literature is not identical to the model number identified in the directory, the manufacturer shall indicate which model number in the directory corresponds with the model number in the sales literature.

(d) Every certification statement shall be dated and signed by the manufacturer attesting to its truth and accuracy under penalty of perjury. Where the manufacturer is either a corporation or a business association, the certification statement shall be dated, signed and attested to by an officer thereof.

(e) Within 45 days after receipt of a certification statement, the executive director shall forward, to the manufacturer, an acknowledgement that the statement has been received and that it is complete and accurate on its face.

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(f) For purposes of subsection (a), certification of a model shall be deemed to occur upon forwarding of the acknowledgement by the executive director. If acknowledgement is not forwarded in a timely manner, certification shall be deemed to occur on the 45th day after receipt of the certification statement.

1606. Enforcement. (a) Notwithstanding the provisions of Section 1605, of these regulations, the executive director shall have authority to challenge the efficiency test results provided by the manufacturer and cause the appliance model to be retested.

(b) The executive director shall cause periodic inspections to be made of manufacturers, distributors or retailers of the new appliances described in Section 1601 of these regulations, including appliances that have been or are to be installed by contractors or builders at building sites, in order to determine their compliance with this article.

(8) A declaration that the appliance model complies with Article 4, Subchapter 4, of Title 20, of the California Administrative Code.

The executive director may, at his discretion, prescribe a standard form for the certification statement.

(c) The manufacturer may, at his discretion, submit the following information in his certification statement in place of the information described in subsection (b)(3) through (7) inclusive of this section.

(1) A copy of those parts of the latest directory published by either the Association of Home Appliance Manufacturers or the Air Conditioning and Refrigeration Institute which apply to the manufacturer's models. Each model being certified shall be clearly identified on the directory pages.

(2) A copy of the sales literature used in California describing each model being certified. If the model number in the sales literature is not identical to the model number identified in the directory, the manufacturer shall indicate which model number in the directory corresponds.

It has been determined that these regulations involve no additional cost pursuant to Section 2231 of the Revenue and Taxation Code.

This order shall take effect on the thirtieth day after its filing with the Secretary of State as provided in Section 11422 of the Government Code.

(e) Within 45 days after receipt of a certification statement, the executive director shall forward to the manufacturer, an acknowledgement that the statement has been received and that it is complete and accurate on its face.

Proposed Addition to Regulations for
Appliance Efficiency Standard

1607 Labeling

- (a) A label giving the certified energy consumption rating(s) in kilowatt-hours per month shall be attached to each refrigerator, refrigerator-freezer or freezer sold or offered for sale in California on or after November 3, 1977.
- (b) A label giving the certified energy efficiency ratio shall be attached to each air conditioner sold or offered for sale in California on or after November 3, 1977.
- (c) A label including the ^{words}~~statement~~ "certified by the manufacturer to comply with the 1979 standards of the California Energy Commission" shall be attached to each refrigerator, refrigerator-freezer, freezer or air conditioner manufactured on or after November 3, 1977, which has been so certified in accordance with the provisions of Section 1605. A label including the ^{words}~~statement~~ "certified by the manufacturer to comply with the 1977 standards of the California Energy Commission" shall be attached to each refrigerator, refrigerator-freezer, freezer or air conditioner, manufactured on or after November 3, 1977, which has been so certified in accordance with provisions of Section 1605, but which has not been certified by the manufacturer as complying with the 1979 standards.
- (d) The labels described in Subsections (a) and (b) may be the same labels as those described in subsection (c) at the option of the manufacturer.

(e)